



Log # TXX-88172
File # 10110
903.6
Ref. # 10CFR50.55(e)

February 5, 1988

William G. Council
Executive Vice President

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION
DOCKET NOS. 50-445 AND 50-446
DEFICIENT PIPE WHIP RESTRAINTS
SUAR: CP-87-56 (FINAL REPORT)

Gentlemen:

On August 7, 1987, we verbally notified your Mr. C. Hale of a deficiency involving construction problems observed in pipe whip restraints that may require extensive reinspections and re-evaluation of the specifications. Our last report was logged TXX-88122, dated January 18, 1988. After further evaluation we have determined that this item is reportable under the provisions of 10CFR50.55(e) and the required information follows.

DESCRIPTION OF DEFICIENCY

The following deficiencies have been observed in pipe whip restraint installations:

- a) tightness in structurally bolted joints
- b) missing components, missing shim welds in bearing type joints, and levelness/plumbness deviations
- c) missing or damaged cotter pins
- d) improper locking device applications
- e) missing field welds (AWS)
- f) deviations for cold gaps between pipe and restraint

These deficiencies were discovered during the third party inspections using procedures, inspection attributes, and criteria developed for the Comanche Peak Response Team (CPRT) Program. The cause of these deficiencies is inadequate engineering direction for installation of the pipe whip restraints. The deficiencies are applicable to pipe whip restraints installed at CPSES (Units 1 and 2).

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SAFETY IMPLICATIONS

These deficiencies could result in the failure of these restraints to perform their intended safety functions.

This issue represents a significant deficiency in construction requiring extensive evaluation to establish the adequacy of the pipe whip restraints to perform their intended safety function.

CORRECTIVE ACTION

Deficiencies a) through e) have been corrected by revision to governing specification 2323-SS-16B, "Structural Steel/Miscellaneous Steel (Category I and II)" to include the installation inspection, and acceptance criteria for pipe whip restraints. During the Post Construction Hardware Validation Program (PCHVP) a reinspection of the pipe whip restraints is being conducted in accordance with Field Verification Methods (FVM) CPE-SWEC-FVM-EE/ME/IC/CS-086, CPE SWEC-FVM-EE/ME/IC/CS-089, CPE-SWEC-FVM-EE/ME/IC/CS-090, and evaluated by ECE 9.04-05.

The corrective action for item f), deviations in cold gaps between pipe and restraint is as follows:

Procedures are being revised to delineate evaluation, tracking and implementation responsibilities to ensure that required final cold gap adjustments are made to satisfy the design requirements. Methods will be prescribed for documenting engineering acceptance of final cold gap settings for all pipe whip restraints. These measures will be implemented when hot functional testing (HFT) is performed.

Recurrence of these deficiencies are prevented by revision of specification 2323-SS-16B which now provides the installation and the inspection criteria for future installations. Construction and Quality Control personnel have been provided additional training in accordance with the revised criteria.

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The Unit 1 completion schedule for this issue will be commensurate with the completion of PCHVP. All corrective actions for Unit 2 will be implemented prior to Unit 2 fuel load.

Very truly yours,

W. G. Council

By: John W. Beck
John W. Beck
Vice President,
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HAM/grr

c-Mr. R. D. Martin, Region IV
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